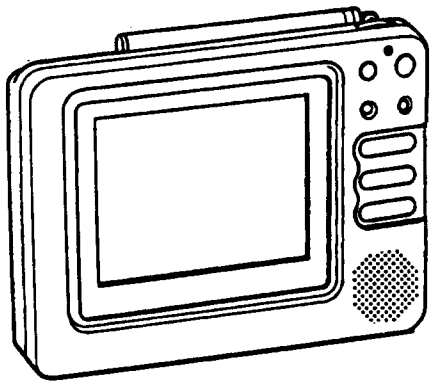
FDL-K400
RM-KS44

SERVICE MANUAL

US Model
Chassis No. SCC-E98A-A



SPECIFICATIONS

Color system	NTSC
Channel coverage	VHF: 2-13 UHF: 14-69
Antenna	VHF/UHF: telescopic antenna
Display format	Transmission type TN liquid crystal panel
Drive format	TFT active matrix
Picture	4 inches measured diagonally 80.6 × 60.5 mm (3 1/4 × 2 1/2 inches) (w/h)
Number of picture element	105,600 (220 × 480)
Effective picture element ratio	more than 99.99%
Speaker	ø 28 mm (1 1/8 inches) (1)
Input terminal	EXT ANT terminal: mini jack 75 Ω A/V IN: minijack Input impedance audio: 47 kΩ, 500 mVrms video: 75 Ω,1 Vp-p
Output terminal	A/V OUT: minijack Output impedance audio: 1 kΩ video: 75 Ω,1 Vp-p Headphone: mini jack monaural (stereo headphones can be connected) Load impedance: 8 – 45 Ω
Power requirements	DC 6.5 V (Refer to "Power Supply".)
Battery life	Refer to "Power Supply"
Power consumption	Approx. 5.2 W
Temperature range	0°C – 40°C (32°F– 104°F)
Dimensions	Approx. 152 × 114 × 36 mm (w/h/d) (6 × 4 1/2 × 1 7/16 inches) without projecting parts and controls
Weight	Approx. 445 g (1 lb oz)

— Continued on page 2 —

LCD COLOR TV

SONY®

MICROFILM

AC-K400 AC power adaptor (supplied)

Rated input voltage	AC 120 V, 60 Hz
Rated output voltage	DC OUT: 6.5 V
Rated output current	0.9 A
Power consumption	Approx. 13 W
Dimensions	Approx. 62 × 52 × 86 mm (w/h/d) ($2^1/_2 \times 2^1/_8 \times 3^3/_8$ inches) without projecting parts and controls
Wire length	Approx. 2 m (6.5 feet)
Weight	Approx. 500 g (1 lb 2 oz)

Accessories supplied

AC-K400 AC power adaptor (1)
RM-KS44 Card Commander (1)
Shading hood (1)
Carring case (1)

Accessories not supplied

SPK-KS44 TV sports pack
VCT-K41 camera mount adaptor
Battery pack: NP-55, NP-55H, NP-66H, NP-77H, NP-77HD
Battery case: EBP-55
DCP-77 car battery DC pack
AVK-715M AV cable
EAC-33, EAC-40, EAC-110 antenna connector

Design and specifications are subject to change without notice.

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SAFETY CHECK-OUT

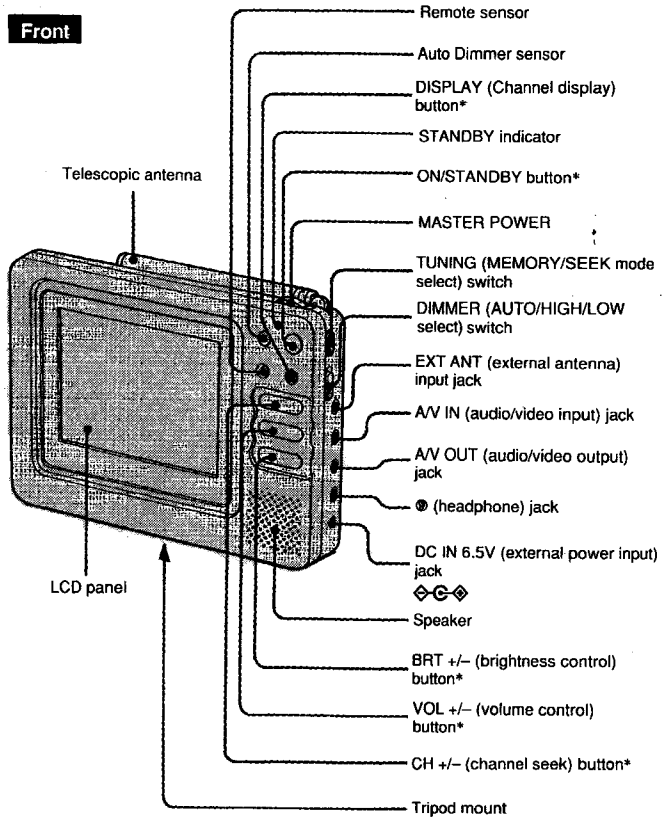
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ to see they are at the values specified.

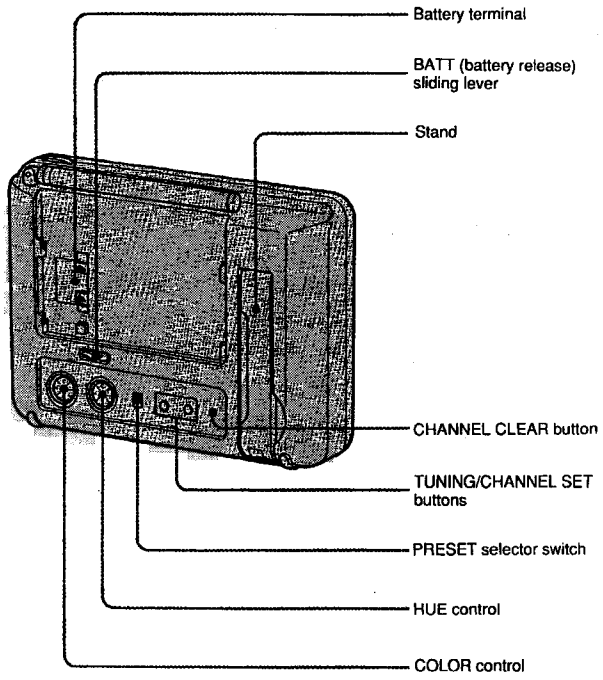
SECTION 1
GENERAL

1-1. PARTS IDENTIFICATION

Front



Rear

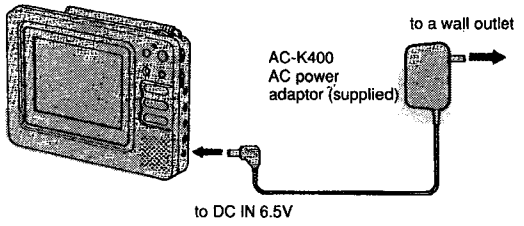


Functions marked with an asterisk can be operated with the Card Commander.

1-2. POWER SUPPLY

This TV uses 6.5 V DC power. Use the AC power adaptor (supplied), the rechargeable battery pack, alkaline batteries (with the battery case) or car battery (with the DC pack).

Using the AC-K400 AC Power Adaptor (supplied)

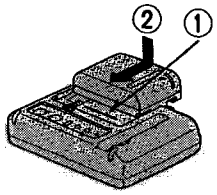


Note

- Use the supplied AC-K400 AC power adaptor only. Using other types of adaptors may cause difficulty.
- When connecting the AC power adaptor while the battery pack or the battery case is attached, turn the TV off first. The power source is automatically switched to the AC power adaptor.
- When not using the AC power adaptor, disconnect it from both the wall outlet and the TV.
- When disconnecting the AC power adaptor, do not pull the cord.
- Do not cover the AC power adaptor with a cloth, etc. during use. This may result in deformation of the cabinet or other damage due to a rise in temperature.
- Do not bend the cord forcefully or put it under a heavy object.

Polarity of the plug

Using the Battery Pack



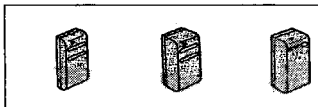
Attach the battery pack to the TV.
① Align the side of the battery pack with the line on the TV.
② While pressing the battery pack, slide it in the direction of the arrow.

Align the battery straight with the unit to attach. If it is at an angle, damage may occur.

Usable time

Repeated charging, while some capacity remains, lowers the battery capacity. One refreshing (forced discharging) is recommended for each five charges.
The following table shows the battery life of each type of battery pack.

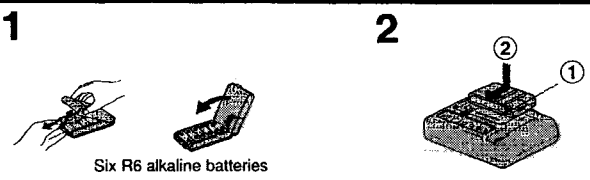
Battery	Usable time
NP-55	Approx. 1 h.10 min.
NP-55H	Approx. 1 h.20 min.
NP-66H	Approx. 2 h.10 min.
NP-77H,77HD	Approx. 2 h.50 min.



Using Alkaline Batteries

Use the EBP-55 battery case (not supplied) and R6 (size AA) alkaline batteries. Refer also to the instruction manual for the EBP-55.

Attaching the EBP-55 Battery Case to the TV



1 Insert six R6 (size AA) alkaline batteries into the battery case with the polarity positioned correctly.

2 Attach the battery case to the TV.
① Align the side of the battery case with the line on the TV.
② While pressing the battery case, slide it in the direction of the arrow.

Align the battery case straight with the unit to attach. If it is at an angle, damage may occur.

Battery life

The following table shows the approximate battery life of Sony alkaline batteries when the TV is used continuously. The use time may differ depending on the type of the battery.

Battery Case	Usable time	R6 alkaline batteries
EBP-55	Approx. 1 hours	6

Note

- Do not use manganese batteries. Use alkaline batteries only.
- Use time is shortened greatly in cold climate.
- When the batteries are exhausted, the LCD panel becomes completely blue. Replace all batteries with new ones.

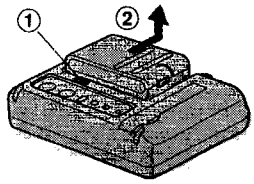
Caution

Improper battery use may cause a leak or rupture. Make sure that:
- the battery polarity is correct.
- old, new, and different types of batteries are not mixed.
- alkaline batteries are not rechargeable.
- when not to be used for a long time, remove the batteries from the battery case.

When a leak has occurred, wipe the liquid from the battery case before inserting new batteries.

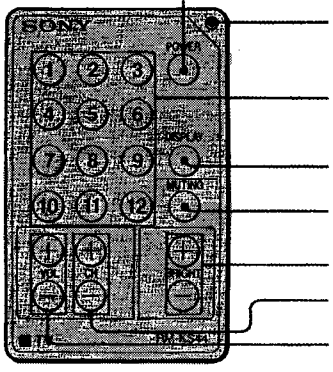
Removing the Battery Pack or the Battery Case

① With the BATT (battery release) lever slid in the direction of the arrow (→),
② remove the battery pack or the battery case.



1-3. OPERATING THE CARD COMMANDER

Parts Identification



POWER button : Press this button to turn the TV on when the TV is in STANDBY mode. Press it again to turn the TV off and set it to STANDBY mode.

Key chain hole: A key chain can be attached through the hole to prevent the loss of the commander.

Number buttons : Press the buttons to select the channel memory.

DISPLAY (channel display) button*

MUTING button

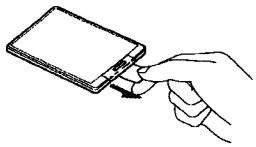
BRIGHT +/– (brightness control) buttons*

CH +/– (channel memory up down/channel seek) buttons*

VOL +/– (volume control) buttons*

Buttons marked with an asterisk have the same function as buttons on the TV with the same name. (BRIGHT is the same as BRT)

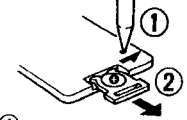
A lithium battery has already been inserted. Remove the insulation sheet before use.



How to Replace the Lithium Battery

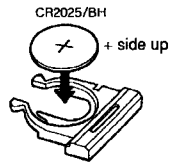
If the TV does not work by operating the Card Commander, it is time to replace the battery.

1 Pull the lithium battery holder out to remove the old one.



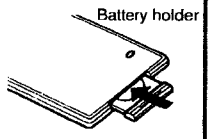
① While putting the tip of a ball point pen, etc. into the hole and sliding it in the direction of the arrow,
② pull out the lithium battery holder.

2 Install the new CR2025/BH lithium battery in the battery holder.



- Wipe the battery well with a dry cloth.
- Make sure that the battery polarity is correct.

3 While holding down the battery, replace the battery holder in the Commander.



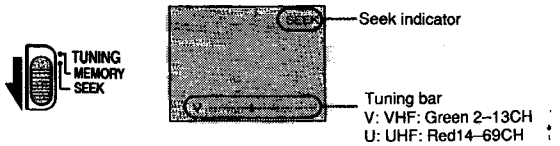
Caution

- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short circuit may occur.
- Do not disintegrate, heat up or put the battery into the water. There is danger of rupture. Dispose of it as non-burnable waste.

1-4. SELECTING CHANNELS (AUTO SEEK TUNING)

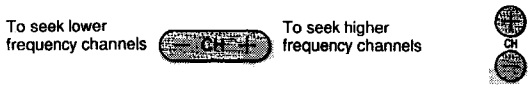
While on a trip this function enables tuning in channels that are not preset (channel memory 1-12), or receivable in that area easily.

1 Set the TUNING switch to SEEK.

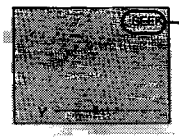


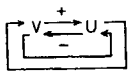
2 Press the CH +/– button.

The TV automatically seeks the channels available .



SEEK indicator stops blinking and lights continuously when the broadcast is tuned in, then it, and the tuning bar disappear after approximately three seconds.





Pressing the CH +/– button repeatedly shifts between VHF and UHF.

To display the tuning bar, press the DISPLAY button. It is possible to select a channel with the number buttons on the Card Commander even when the TUNING switch is in the SEEK position. Press the CH +/– button to return the SEEK mode. If the TV is turned off after tuning the channel by the number buttons on the Card Commander, the SEEK indicator will appear on the screen when the TV is turned on again as long as the TUNING switch is set at SEEK.

1-5. PRESETTING NEW CHANNELS IN CHANNEL MEMORY 1-12

How to preset new channels 2-69:

Example: Presetting UHF CH 35 on channel memory 2 and indicating channel number 35 when channel memory 2 is selected.

Preparation

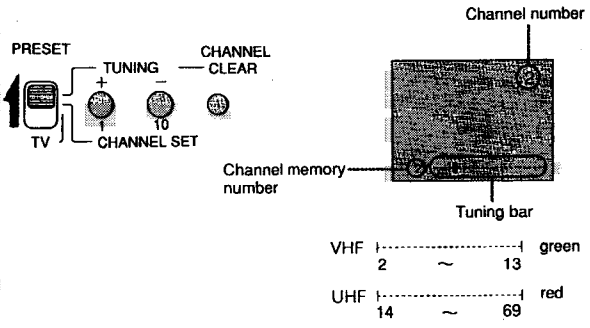
1 Turn the MASTER POWER switch to ON.

When STANDBY indicator is lit, press the ON/STANDBY button.

2 Set the TUNING switch to MEMORY.

Displaying the channel memory you preset on

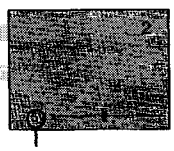
3 Set the PRESET switch on the rear of the TV to TUNING. The tuning mode screen appears.



Here the desired channel memory number can be changed with the CH +/– button or number buttons on the Card Commander.

Press the CH +/– button until the desired channel memory number appears.

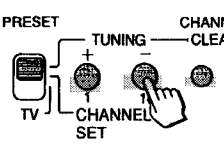
Press the desired channel memory number.

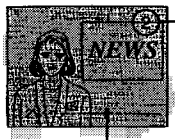


Desired channel memory number

Receiving desired broadcast

4 Press the TUNING +/– buttons to display the desired UHF 35 CH. (The channel number 35 is not displayed at this time. Determine the channel by the program and the position of the mark on the tuning bar.)



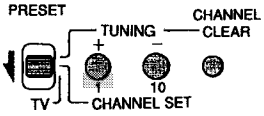


The channel indicator stops blinking and lights up when the broadcast is received.

The mark on the tuning bar moves when the TUNING +/– buttons are pressed, and stops when the broadcast is tuned in.

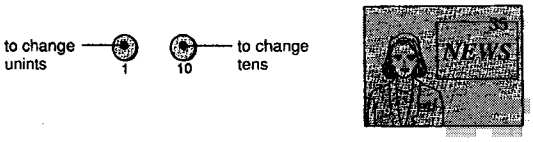
Setting the channel number

5 Set the PRESET switch to CHANNEL SET.



Setting the channel number

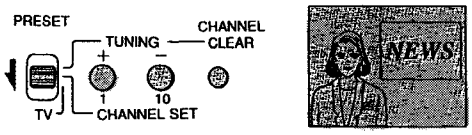
6 Display 35 (channel number) with the CHANNEL SET buttons 1 (units) or 10 (tens).



The channel number goes out after approximately three seconds.
To display it again, press the CHANNEL SET buttons 1 or 10.

Completion

7 Reset the PRESET switch to TV.



Now UHF 35 CH will be displayed when the channel indicator is set to 35 with the CH +/– buttons, or when the number button 2 on the Card Commander is pressed.

When you preset other new channels, repeat the above procedure 2 through 6. Each channel has to be preset individually. Up to twelve channels can be preset.

By using the same procedure, you can change the order of VHF/UHF channels as your preference.
Set the PRESET switch to TUNING to confirm the preset channels. After that reset the PRESET switch to the TV position.

To reset the preset channel to its original position, use the same procedure.

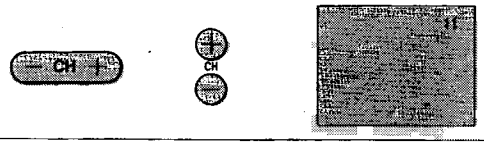
Note

- Only receivable channels can be preset.
- The use of an external antenna is recommended when the reception through the telescopic antenna is unstable. (Regarding the external antenna connection, refer to page 25.)
- The number buttons on the Card Commander refer to the channel memory numbers. Memorized channel numbers in channel memories are displayed when the number buttons are pressed.

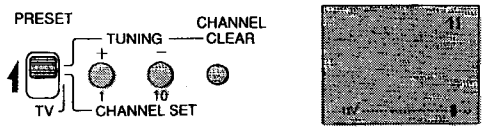
1-6. ERASING UNNECESSARY CHANNEL MEMORIES

Example: Erasing CH 11

1 Press the CH +/– button to select CH 11.

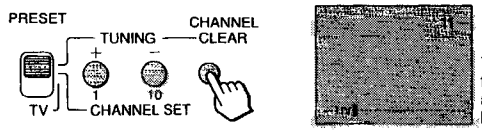


2 Set the PRESET switch on the rear of the TV to TUNING.



The tuning bar appears.

3 Press the CHANNEL CLEAR button.



The mark on the tuning bar moves to the left.

4 Reset the PRESET switch to TV.

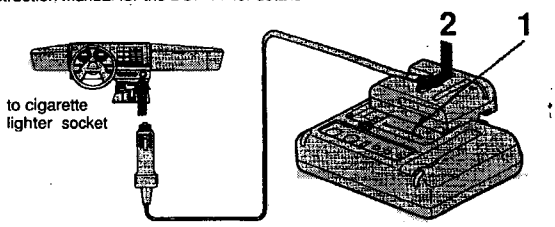
Channel 11 has now been erased. The next time the CH +/– buttons are pressed, this channel will be skipped and the following channel will appear. (With the number buttons on the Card Commander, this channel will not be skipped.)

To display the erased channel again, follow the "Presetting new channels on channel memory 1-12" procedure to re-preset the erased channel.

1-7. USING THE TV WITH A CAR BATTERY

Because it is dangerous, the driver should never operate the TV or watch the screen while driving a car. Do not install the TV in the position where the driver can see it.

The DCP-77 DC pack (for both 12/24V cars, not supplied) is required. Refer to the instruction manual for the DCP-77 for details.



1 Align the side of the DC pack with the line on the TV unit.

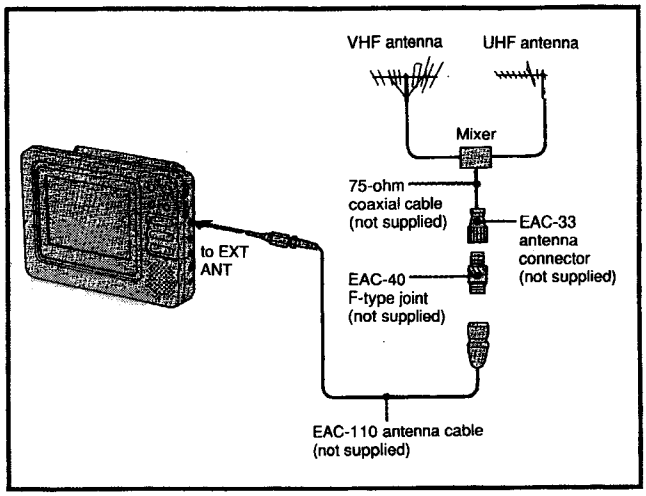
2 While pressing down on the DC pack, slide it in the direction of the arrow.

Align the DC pack straight with the TV unit to attach. If it is at an angle, the unit may be broken.

Caution

- Connect the DCP-77 DC pack to a negatively grounded car only.
- Do not leave the TV in a car with all the windows closed and exposed to direct sunlight. Extremely high temperature may result in damage or deformation. Never install the TV unit in a car permanently.
- The car battery will run down if the TV unit is used for a long time with the car engine stopped. Keep the engine running while the unit is being used.
- Do not forget to pull out the DCP-77's cigarette lighter plug from the cigarette lighter socket when getting out of the car.

1-8. CONNECTING THE EXTERNAL ANTENNA



Note

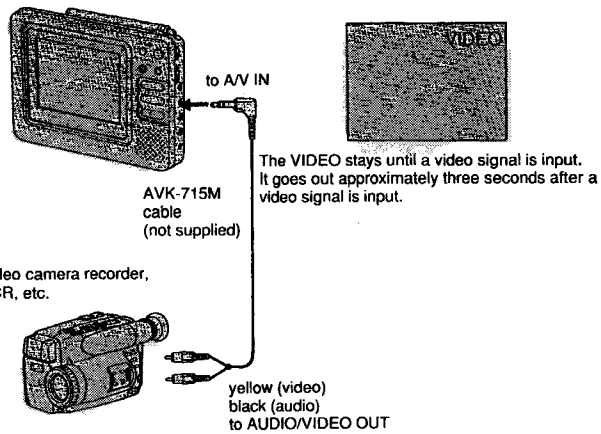
There are many ways to connect an antenna. Consult your Sony dealer for details.

1-9. CONNECTING OTHER EQUIPMENT

Using the TV as a Monitor

This unit can also be used as a compact color monitor for an 8 mm camcorder.

When a plug is inserted into the A/V IN jack, the display changes to video screen and VIDEO appears.

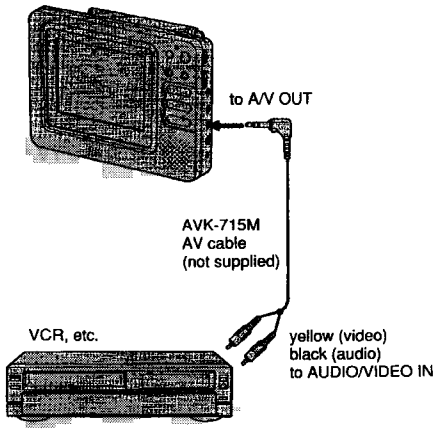

to A/V IN
VIDEO
The VIDEO stays until a video signal is input. It goes out approximately three seconds after a video signal is input.
AVK-715M cable (not supplied)
Video camera recorder, VCR, etc.
yellow (video)
black (audio)
to AUDIO/VIDEO OUT

Note

- If the screen is distorted or noise occurs, move the TV away from the VCR.
- The picture may not be stable depending on the equipment (such as a personal computer, etc.).
- Use the AVK-715M connecting cable only.

Recording a TV Programme with VCR, etc.

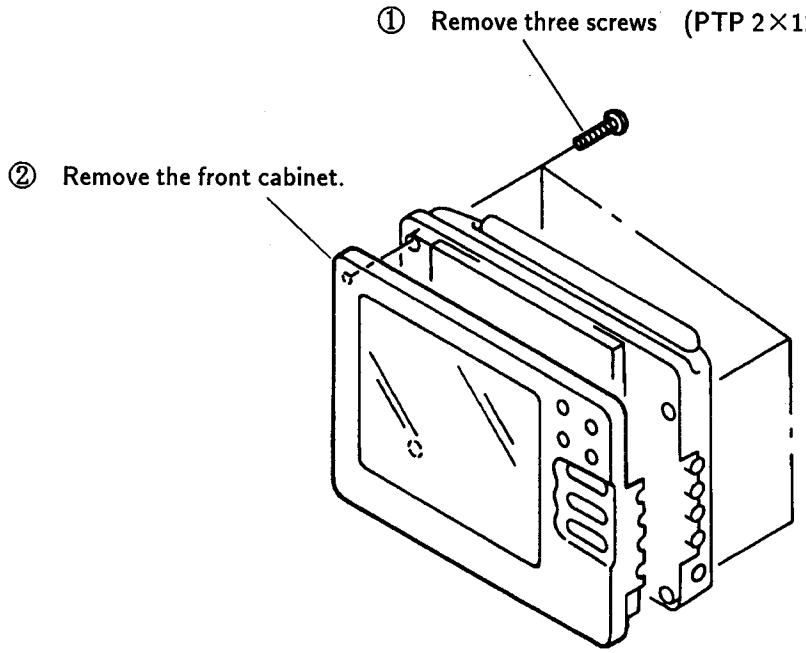
A TV program on the screen can be recorded.



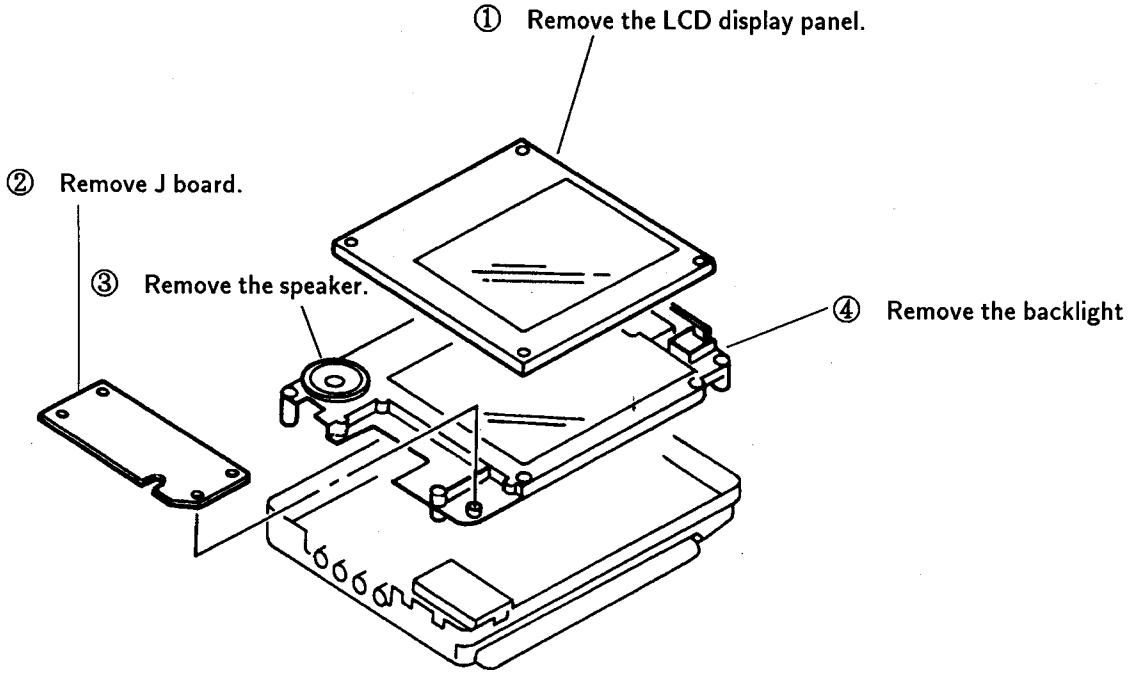
The use of an external antenna is recommended for better recording.

SECTION 2
DISASSEMBLY

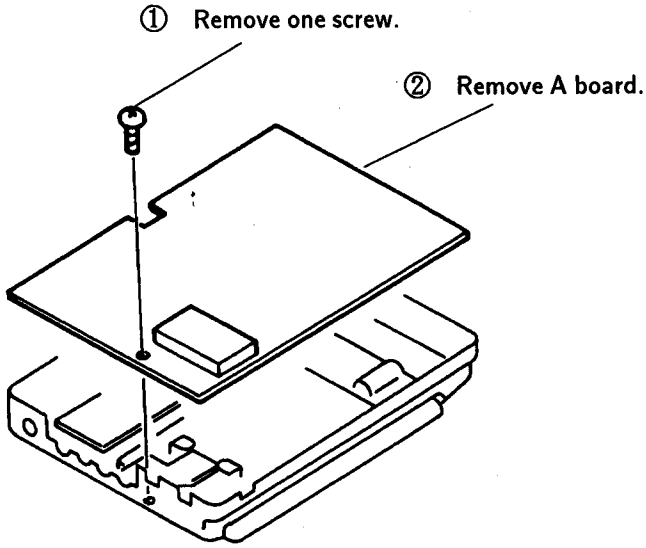
2-1. REMOVAL OF FRONT CABINET



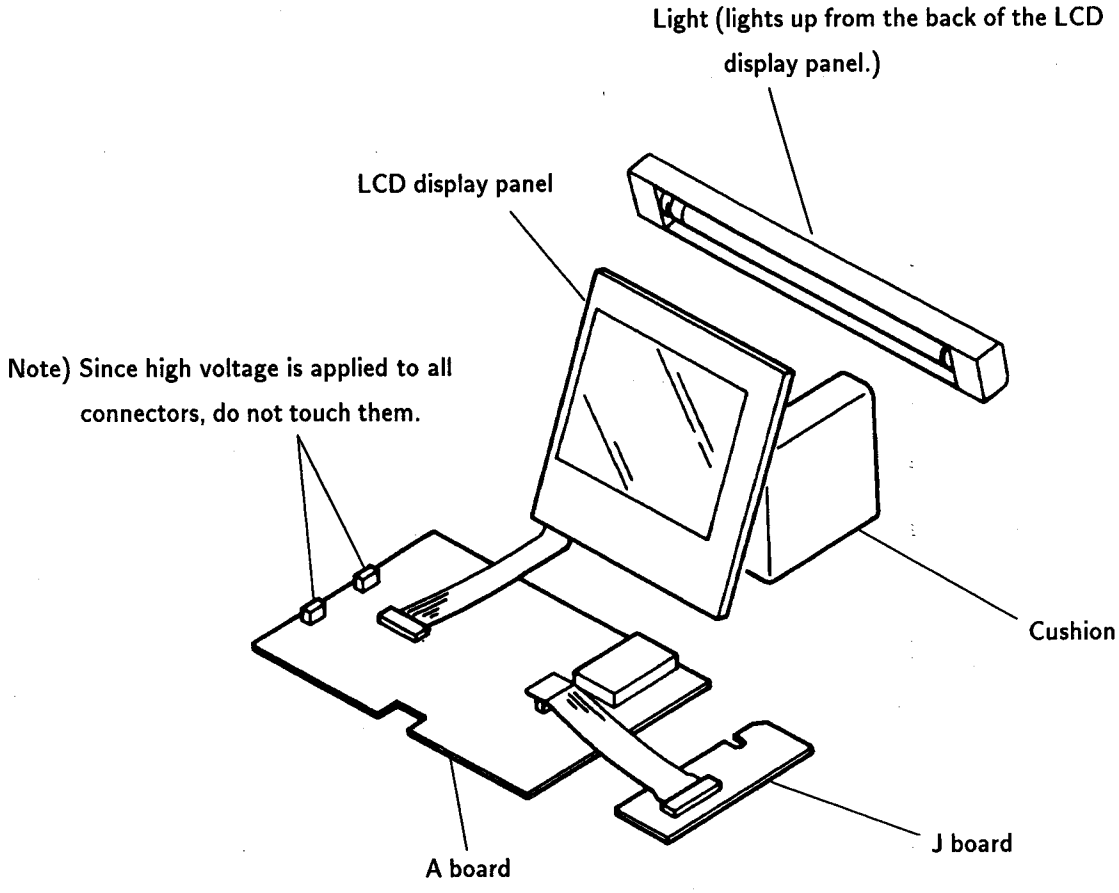
2-2. REMOVAL BACKLIGHT



2-3. REMOVAL A BOARD

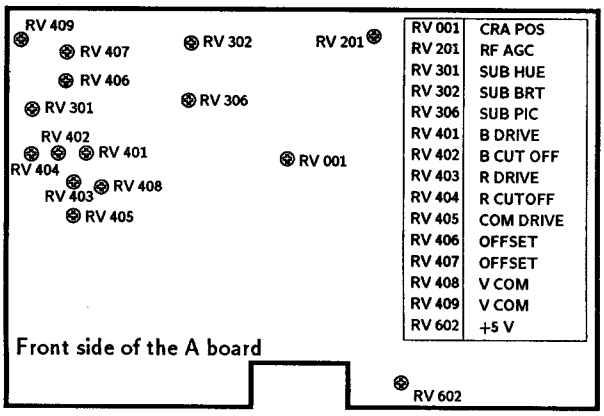


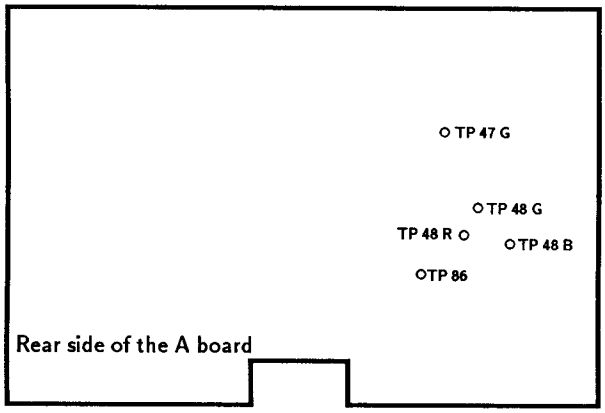
2-4. SERVICE POSITION OF A BOARD


Light (lights up from the back of the LCD display panel.)
LCD display panel
Note) Since high voltage is applied to all connectors, do not touch them.
Cushion
J board
A board

SECTION 3
CIRCUIT ADJUSTMENTS

3-1. A BOARD ADJUSTMENTS





+5 V adjustment (RV 602)

1. Adjust RV 602 so that the +5 V line becomes +5.0 ±0.1 V in TV reception status.

RF AGC adjustment (RV 201)

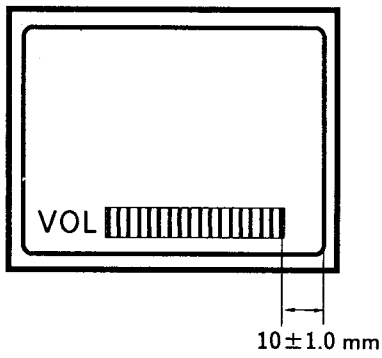
1. Receive a broadcast signal.
2. Adjust RV 201 so that snow-like noise and cross modulation will be eliminated.

Hue adjustment (RV 301)

1. Receive a broadcast signal.
2. Set RV 702 on the M board to the mechanical center.
3. Adjust RV 301 so that the hue becomes optimum.

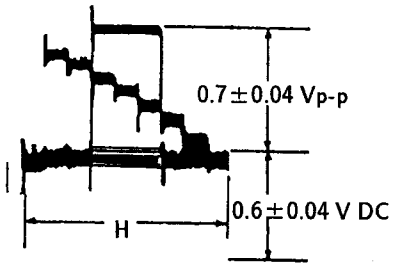
Character size adjustment (RV 001)

1. Display the VOL bar by pressing the VOL button.
2. Adjust RV001 so that the right edge of the character display is located at the position of 10±1.0 mm from the right side of the screen.



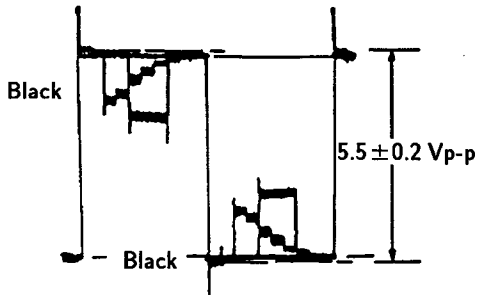
SUB BRT, PIC adjustment (RV 302, 306)

1. Input a color bar chroma off signal from J 301 (AV IN).
2. Set BRT to the center position.
3. Adjust RV306 so that the level of TP47G becomes 0.6±0.04V DC.
4. Adjust RV 406 so that TP 47 G becomes 0.7±0.04 Vp-p from black ievel to white level.

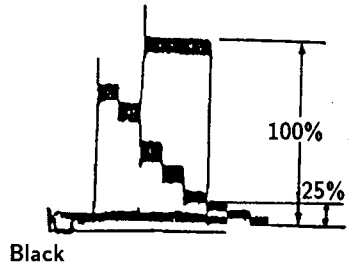


Offset adjustment (RV 405, 406, 407)

1. Input a color bar chroma off signal (1 Vp-p) from J 301 (AV IN).
2. Set RV 405 (COM drive) and RV 407 (offset) to the mechanical center.
3. Adjust RV 406 so that the amplitude from black to black of TP 48 G becomes 5.5±0.2 Vp-p



4. Adjust RV405 and RV407 so that the level of TP48G becomes the value shown in the figure below.



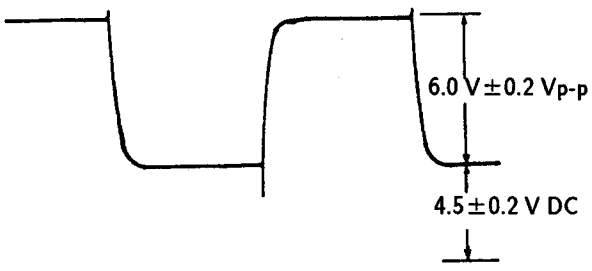
Adjust RV 405 so that the value from black to 100% white becomes 3.8±0.2 Vp-p.

Adjust RV 407 so that the varue from black to 25% (third step) becomes 1.2±0.2 Vp-p

※ Since RV 407 and RV 405 have a mutual relationship, adjust repeatedly.

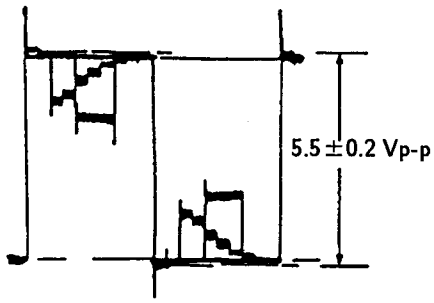
V COM adjustment (RV 408, RV 409)

1. Receive a broadcast.
2. Adjust RV 408 (amplifier) and RV 409 (bias) so that the waveform of TP 88 becomes like the shape shown in the figure below.
3. Adjust RV 409 so that the contrast becomes MAX.



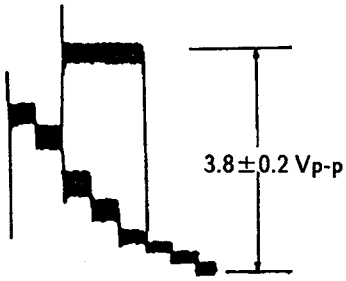
Cut off adjustment (RV 402, RV 404)

1. Input a color bar chroma off signal (1 Vp-p) from J 301 (AV IN).
2. Adjust RV 404 R cut off...TP 48 R and
   RV 402 B cut off...TP 48 B
   sequentially so that each amplitude from black to black of TP 48 R and TP 48 B becomes 5.5±0.2 Vp-p.



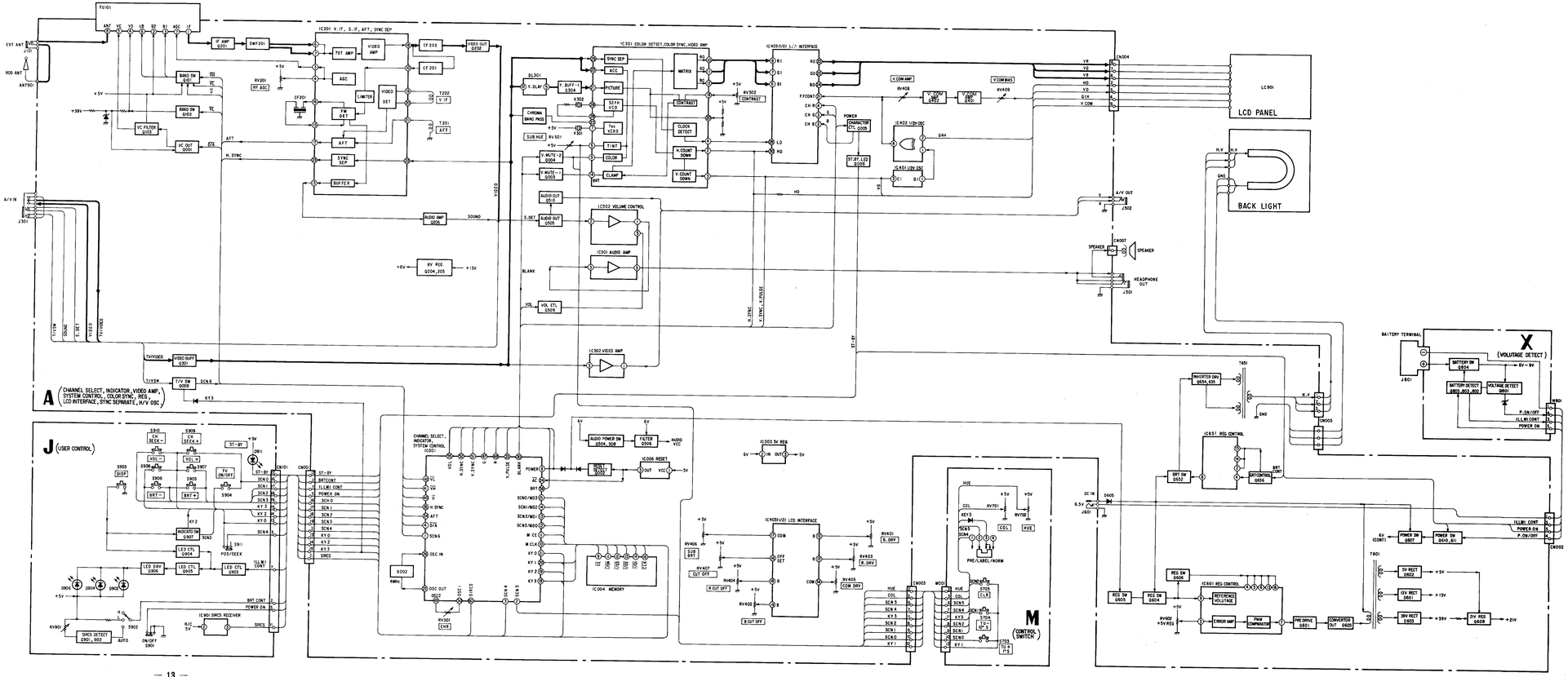
Drive adjustment (RV 401, RV 403)

1. Input a color bar chroma off signal (1 Vp-p) from J 301 (AV IN).
2. Adjust RV 403 R drive...(TP 48 R) and
   RV 401 B drive...(TP 48 B)
   sequentially so that each amplitude of TP 48 R and TP 48 B becomes 3.8±0.2 Vp-p.

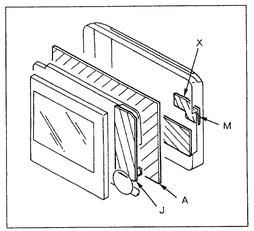


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM


A (CHANNEL SELECT, INDICATOR, VIDEO AMP., SYSTEM CONTROL, COLOR SYNC. REG., LCD INTERFACE, SYNC SEPARATE, H/V OSC.)
J (USER CONTROL)
M (CONTROL SWITCH)
X (VOLUTAGE DETECT)
LCD PANEL
BACK LIGHT
SPEAKER
HEADPHONE OUT
BATTERY TERMINAL
IC201 V.IF, S.IF, AFT, SYNC SEP
IC301 COLOR DETECT, COLOR SYNC, VIDEO AMP
IC403/IC01 LCD INTERFACE
IC502 VOLUME CONTROL
IC501 AUDIO AMP
IC302 VIDEO AMP
IC651 REG CONTROL
IC601 REG CONTROL
IC004 MEMORY
IC901 SIRCS RECEIVER
IC003 5V REG
IC006 RESET
IC402 I/2H OSC
IC401 I/2H OSC
INVERTER DRV Q654, 655
BATTERY SW Q654
BATTERY DETECT Q652, 653, 655
VOLTAGE DETECT Q651
POWER SW Q607
POWER SW Q650, 651
REG SW Q605
REG SW Q604
5V REG Q602
9V REG Q603
5V REG Q608
PRE-DRIVE Q661
CONVERTER OUT Q660
T601
T651
CN004
CN005
CN007
CN002
CN003
CN001
CN900
J501
J502
J601
J651
J801
TU101
EXT ANT
ROD ANT
ANT SW
BAND SW Q101
BAND SW Q102
VC FILTER Q103
VC OUT Q001
IF AMP Q201
IF VCO
CF 202
CF 201
VIDEO OUT Q202
VIDEO AMP
AGC
VIDEO DET
FM DET
AFT
SYNC SEP
BUFFER
TRAP
LIMITER
RV201 RF AGC
CF201
T202 V.IF
T201 S.IF
DL301 Y. DELAY
P. BUFF-I Q304
CHROMA BAND PASS
SUB HUE RV301
V. MUTE-I Q004
V. MUTE-II Q003
AUDIO OUT Q510
AUDIO OUT Q505
AUDIO AMP Q506
8V REG Q504, 505
VOL CTL Q509
SYNC SEP
ACC
PICTURE
32 f/f VCO
TINT
COLOR
CLAMP
MATRIX
CONTRAST
CLOCK DETECT
H. COUNT DOWN
V. COUNT DOWN
RV302 CONTRAST
RV303 TINT
RV304 COLOR
RV305 SHARPNESS
RV306 H. POSITION
RV307 V. POSITION
RV308 V. COM AMP
RV309 V. COM BIAS
V. COM AMP Q402
V. COM AMP Q401
POWER CONTROL Q005
ST-BY LED Q009
AUDIO AMP Q501
AUDIO AMP Q502
VOL Q501
VOL Q502
AUDIO POWER SW Q504, 506
FILTER Q506
MUTE Q507
SURROUND Q508
RV401 B. DRIV
RV403 R. DRIV
RV405 COM DRV
RV406 SUB BRT
RV407 CUT OFF
RV408 CUT OFF
RV701 COL
RV702 HUE
RV901 CHR
RV902 +5V REG
RV903 H. POSITION
RV904 V. POSITION
RV905 V. SIZE
RV906 V. LINEARITY
RV907 H. SIZE
RV908 H. PHASE
RV909 SUB CONT
RV910 SUB COLOR
RV911 SUB TINT
RV912 SUB SHARP
RV913 SUB H. POS
RV914 SUB V. POS
RV915 SUB V. SIZE
RV916 SUB V. LIN
RV917 SUB H. SIZE
RV918 SUB H. PHASE
RV919 SUB V. PHASE
RV920 SUB V. SLOPE
RV921 SUB V. COM
RV922 SUB V. COM BIAS
RV923 SUB V. COM AMP
RV924 SUB V. COM BIAS
RV925 SUB V. COM AMP
RV926 SUB V. COM BIAS
RV927 SUB V. COM AMP
RV928 SUB V. COM BIAS
RV929 SUB V. COM AMP

4-2. CIRCUIT BOARDS LOCATION



4-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

Note :

- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  kΩ = 1000 Ω, MΩ = 1000K Ω
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : ¼W

- : nonflammable resistor.
- : fusible resistor.
- △ : internal component.
- : panel designation or adjustment for repair.
- All variable and adjustable resistors have charactristic curve B, unless otherwise noted.
- Readings are taken with a color-bar signal input.
- Readings are taken with a 10M Ω digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- : Can not be measured.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Reference information

RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	IR	: ADJUSTMENT RESISTOR
COIL	LF-BL	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

A BOARD WAVEFORMS

① 0.52Vp-p (500kHz)	② 0.9Vp-p (H)	③ 0.15Vp-p (H)	④ 0.25Vp-p (H)
⑤ 4.8Vp-p (H)	⑥ 4.6Vp-p (V)	⑦ 0.2Vp-p (3.58MHz)	⑧ 0.85Vp-p (H)
⑨ 0.9Vp-p (H)	⑩ 0.85Vp-p (H)	⑪ 1Vp-p (H)	⑫ 4Vp-p (H)
⑬ 1Vp-p (H)	⑭ 0.9Vp-p (H)	⑮ 1.9Vp-p (H)	⑯ 1.4Vp-p (4MHz)
⑰ 8Vp-p (H)	⑱ 8Vp-p (H)	⑲ 8.5Vp-p (H)	

M	0704	MA110	STOPPER

	Q801	2SA1611	VOLTAGE DETECT
	Q802	2SC4177	VOLTAGE DETECT
	Q803	2SC4177	LED CONTROL
	Q804	2SA1242	BATTERY SWITCH
	Q805	2SC4177	BATTERY DETECT
X	D801	MA110	VOLTAGE DETECT
	D802	RD5.1MB2	VOLTAGE DETECT
	D803	MA110	VOLTAGE DETECT
	D804	RD33MB2	VOLTAGE DETECT
	D805	MA110	THERMO COMPENSATION
	D806	RD13M	PROTECT
	D807	RD13M	PROTECT
	D808	RD13M	PROTECT

	IC601	BX-1393	SIRCS RECEIVER
	Q601	2SA1611	SIRCS DETECT
	Q602	2SA1611	SIRCS DETECT
	Q603	2SC4177	LED CONTROL
	Q604	DTC114EU	LED CONTROL
	Q605	DTA114EU	LED CONTROL
	Q606	DTC114EU	LED DRIVE
	Q607	2SC4177	INDICATOR SWITCH
J	D901	RD6.2SB	PROTECT
	D902	SLM130W	KEY SWITCH LED
	D903	RD6.2SB	PROTECT
	D904	SLM130W	KEY SWITCH LED
	D905	RD6.2SB	PROTECT
	D906	SLM130W	KEY SWITCH LED
	D907	RD6.2SB	PROTECT
	D908	MA110	STOPPER
	D909	MA110	STOPPER
	D910	SLM130W	ST-BY
	D911	MA110	STOPPER

IC001	MSD439-913FP	CHANNEL SELECT, INDICATOR SYSTEM CONTROL
IC003	S-81250NG-RG-T1	5V REG
IC004	CXK1024M	MEMORY
IC005	PST5209MT-T1	RESET
IC007	HZ133-02TE	33V REG
IC201	CXD9183	VIF, SIF, AFT SYNC SEPARATE
IC301	TA8735F	COLOR DETECT, CDL SYNC, VIDEO AMP
IC302	M51131SYMR	VIDEO AMP
IC401	MIC4013SF	1-2V OSC
IC402	TC4053F	1-2ch OSC
IC423	TA8596F	LCD INTERFACE
IC501	NJM3694	AUDIO AMP
IC502	M52229FP	VOLUME CONTROL
IC601	M38775FP	REG CONTROL
IC651	M38758FP	REG CONTROL
Q001	2SC4177	VC OUT
Q002	DTA144EU	RESET DETECT
Q003	DTC144EU	VIDEO MUTE-1
Q004	DTC144EU	VIDEO MUTE-2
Q005	LMA12	ST-BY LED SWITCH-Y/BLUE CHARACTER CONTROL
Q008	2SC4177	VIDEO/TV SWITCH
Q009	2SC4177	ST-BY LED DRIVE
Q101	UMT1	BAND SELECT
Q102	2SC4177	BAND SELECT
Q103	2SC4177	VC FILTER
Q201	2SC2715-Y	IF AMP
Q202	2SA1611	VIDEO OUT
Q204	2SA1213	8V REG
Q205	2SC4177	8V REG
Q206	2SC4177	AUDIO AMP
Q301	2SC4177	VIDEO BUFFER
Q304	2SA1611	Y BUFFER
Q401	UMZ1	V COM AMP
Q402	UMX1	V COM AMP
Q504	2SC4177	AUDIO POWER SWITCH
Q505	2SC4177	AUDIO BUFFER
Q506	2SD1360	FILTER
Q508	2SA1611	AUDIO POWER SWITCH
Q509	2SC4177	VOLUME CONTROL
Q510	UMZ1	AUDIO OUT
Q601	UMZ1	PREDRIVE
Q603	2SD1814	CONVERTER OUT
Q604	DTA144EU	REG SWITCH
Q605	2SC4177	REG SWITCH
Q606	DTA114YU	REG SWITCH
Q607	2SA1611	POWER SWITCH
Q608	UMX1	21V REG
Q610	2SC4177	POWER SWITCH
Q611	2SC4177	POWER SWITCH
Q652	2SA1242	BRT CONTROL
Q654	2SC2873	INVERTER DRIVE
Q655	2SC2873	INVERTER DRIVE
Q656	2SC4177	BRT CONTROL
Q657	DTA114	BRT CONTROL
D001	MA110	ADD
D002	MA110	ADD
D010	MA110	STOPPER
D015	MA110	STOPPER
D016	MA110	STOPPER
D017	MA110	STOPPER
D201	RD9.1SB	REG
D301	RD6.2SB	PROTECT
D302	RD5.2SB	PROTECT
D401	RD6.2SB	PROTECT
D402	RD6.2SB	PROTECT
D403	RD6.2SB	PROTECT
D404	RD6.2SB	PROTECT
D405	RD5.2SB	PROTECT
D406	RD15SB	PROTECT
D407	RD15SB	PROTECT
D408	RD15SB	PROTECT
D409	RD15SB	PROTECT
D410	RD15SB	PROTECT
D411	RD24M	PROTECT
D501	MA110	PROTECT
D502	MA110	PROTECT
D601	SG302-06	13V RECT
D602	SG302-06	5V RECT
D603	SG302-2	39V RECT
D605	2SD224-TA2	PROTECT
D606	MA110	THERMO COMPENSATION
D651	SG302-06	PROTECT
D652	1SS119	PROTECT
D653	1SS119	PROTECT

CHANNEL SELECT, INDICATOR, VIDEO AMP, SYSTEM CONTROL, COLOR SYNC, LCD INTERFACE, SYNC SEPARATE, REG. H,/V OSC.

A | A

IC

IC001	C-6
IC003	D-4
IC201	B-6
IC301	B-3
IC402	D-1
IC403	B-2
IC501	D-8

TRANSISTOR

Q001	D-5
Q008	D-6
Q103	B-9
Q204	B-4
Q205	B-4
Q301	C-8
Q509	D-7
Q601	F-6
Q603	F-7
Q607	D-7
Q652	F-3

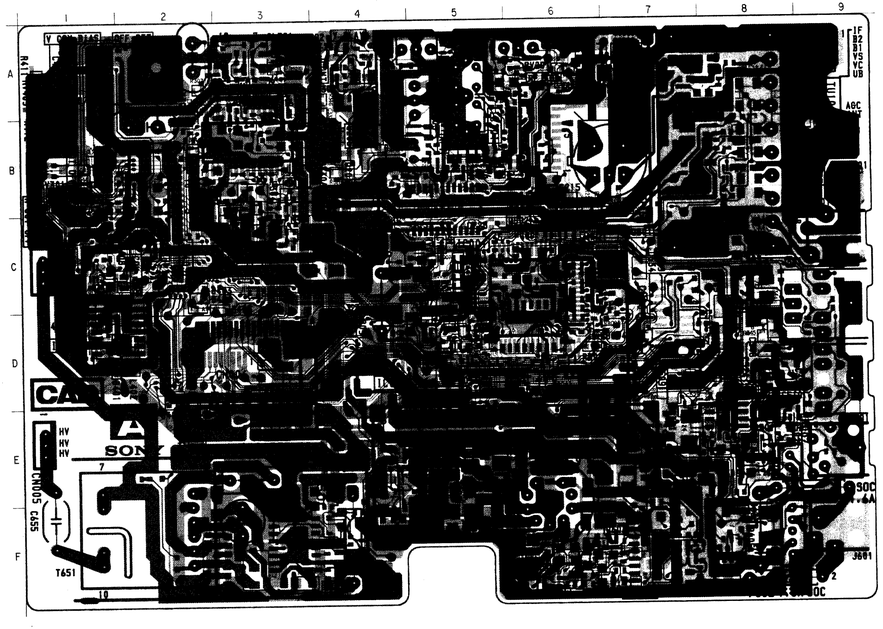
DIODE

D010	D-6
D015	D-8
D201	B-4
D301	C-3
D401	D-2
D402	C-2
D403	C-2
D404	C-2
D405	C-3
D406	D-2
D407	D-2
D408	D-2
D409	D-2
D410	D-3
D411	D-3
D501	E-8
D502	E-8
D605	F-8

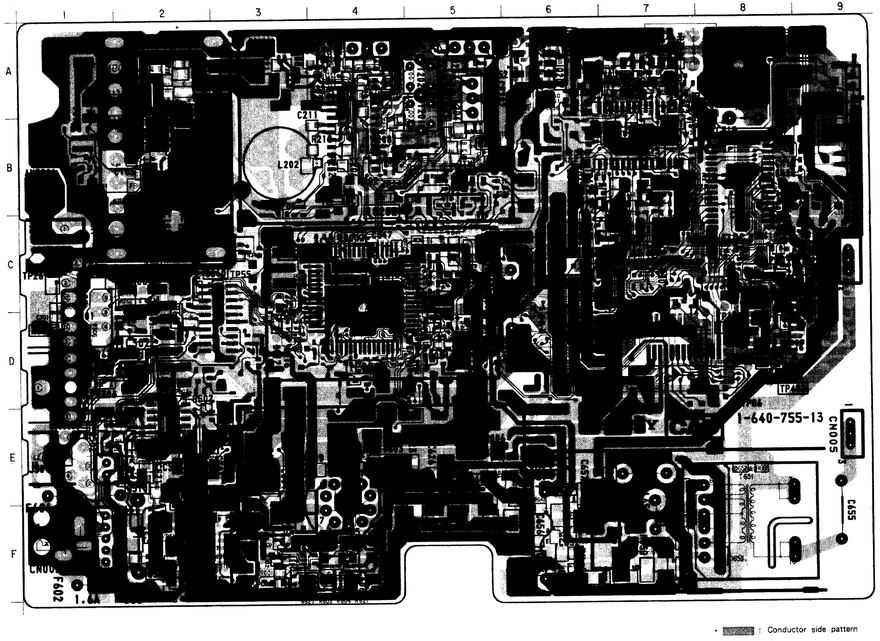
VARIABLE RESISTOR

RV001	C-5
RV201	A-6
RV301	B-1
RV302	A-4
RV306	B-4
RV401	B-1
RV402	B-1
RV403	C-1
RV404	B-1
RV405	C-1
RV406	B-1
RV407	A-1
RV408	C-1
RV409	A-1
RV602	F-7

— A Board — (COMPONENT SIDE)



(CONDUCTOR SIDE)



: Conductor side pattern
: Component side pattern

IC

IC004	D-4
IC005	C-4
IC007	D-6
IC302	D-2
IC401	D-8
IC502	E-2
IC601	F-3
IC651	F-7

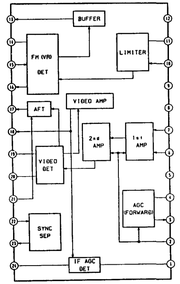
TRANSISTOR

Q002	C-4
Q003	D-5
Q004	C-6
Q005	C-5
Q009	C-5
Q101	B-2
Q102	A-2
Q201	A-2
Q202	B-5
Q206	A-4
Q304	A-7
Q401	C-8
Q402	C-9
Q504	F-2
Q505	E-2
Q506	E-2
Q508	F-2
Q510	E-2
Q604	F-2
Q605	F-3
Q606	F-4
Q608	E-5
Q610	C-3
Q611	D-2
Q654	F-7
Q655	F-7
Q656	F-6
Q657	E-6

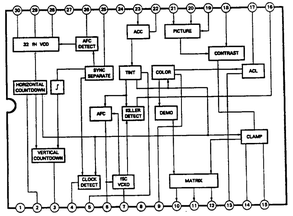
DIODE

D001	C-4
D002	C-4
D016	D-3
D017	D-3
D018	D-5
D302	C-7
D601	F-5
D602	F-4
D603	E-4
D606	F-4
D651	F-7
D652	E-8
D653	F-8

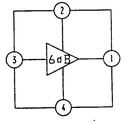
A BOARD IC201 CX20183



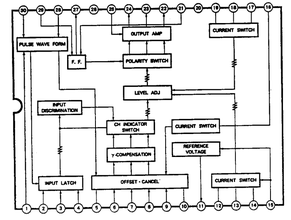
A BOARD IC301 TA8735F



A BOARD IC302 MM1031XMR



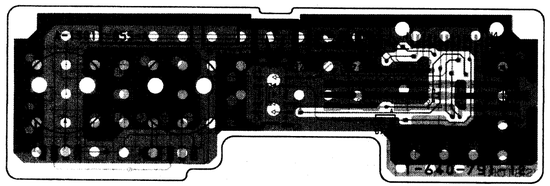
A BOARD IC403 TA8696F



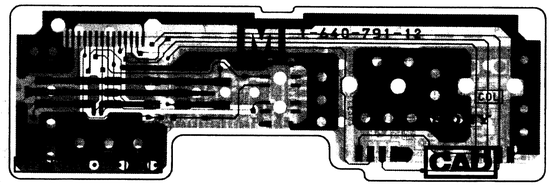
[VOLTAGE DETECT] X [USER CONTROL] J [CONTROL SWITCH] M

M J X

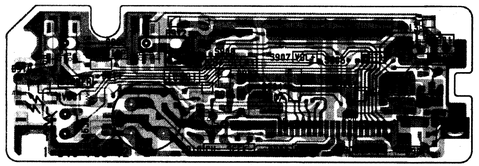
–M Board– (COMPONENT SIDE)



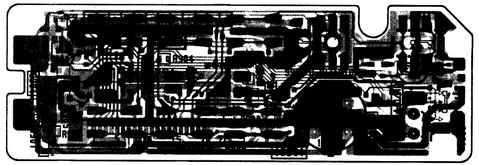
(CONDUCTOR SIDE)



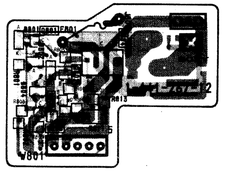
–J Board– (COMPONENT SIDE)



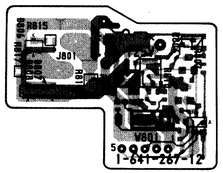
(CONDUCTOR SIDE)



–X Board– (COMPONENT SIDE)



(CONDUCTOR SIDE)



· ▨ : Conductor side pattern

· ▨ : Component side pattern

4-4. SEMICONDUCTORS

BX-1393

CXK1005M

CX20183

MB3759PF
MB3775PF

MC14013BF

MM1031XMR

M50439-913FP

M5222FP
NJM386M

PST529DMT

S-81250HG-RD-S

TA7409F

TA8696F
TA8735F

TC4S30F

DTA114EU
DTA114YU
2SA1611-M5M6
2SC2715-Y
2SC4177-L6

DTA144EU
DTC114EU
DTC144EU

UMG2

UMT1
UMX1
UMZ1

2SA1242-Y

2SB798-DL
2SD1366A-D
2SD1621-R
2SD1623-R

ERB83-004

MA110

RD3.6M-B2
RD5.1M-B2

RD6.2SB
RD9.1SB
SC802-06
SC802-2

SLM13DW
SLM13VW

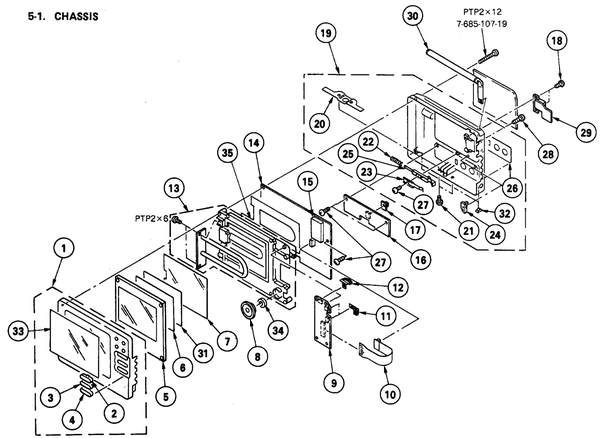
μPC57J

SECTION 5
EXPLODED VIEW

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CHASSIS



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-185-1	CABINET ASSY, FRONT (BLACK)	2-4
	X-4030-192-1	CABINET ASSY, FRONT (WHITE)	2-4
2	4-033-470-01	KEY, SEESAW (CH)	
3	4-033-470-11	KEY, SEESAW (VOL)	
4	4-033-470-21	KEY, SEESAW (BRT)	
5	1-808-989-12	MODULE, LIQUID DISPLAY PANEL	
6	4-033-934-01	ILLUMINATOR	
7	4-033-476-01	CURTAIN	
8	1-544-584-11	SPEAKER (2.8CM)	
9	A-1594-318-A	J BOARD, COMPLETE	
10	1-640-784-11	PC BOARD, FP-AJ FLEXIBLE	
11	4-033-475-01	KEY (B), SLIDE	
12	4-033-474-01	KEY, POWER	
13	1-550-734-11	BACK LIGHT UNIT	
14	A-1296-919-A	A BOARD, COMPLETE	
15	⚠ 1-693-826-11	ET TUNER (BT-5A101)	
16	A-1301-855-A	M BOARD, COMPLETE	
17	4-033-478-01	KEY (A), SLIDE	
18	4-908-792-51	SCREW (BZX5), TAPPING, P1	
19	X-4030-186-1	CABINET ASSY, REAR (BLACK)	20-27,32
	X-4030-193-1	CABINET ASSY, REAR (WHITE)	20-27,32
20	3-747-369-01	SCREW, TRIPOD	
21	3-710-381-01	SCREW (M2X3)	
22	3-740-618-01	SPRING, COMPRESSION	
23	4-033-479-01	SPRING, BATTERY	
24	4-033-483-01	HOOK, BATTERY	
25	4-033-486-01	SLIDE, BATTERY	
26	4-033-490-11	PLATE, ORNAMENTAL	
27	4-908-792-41	SCREW (BZX5), TAPPING, P1	
28	4-990-020-01	SCREW (M2.6X6)	
29 *	A-1390-290-A	X BOARD, COMPLETE	
30	1-501-523-11	ANTENNA, TELESCOPIC	
31	4-034-037-01	SHEET, CONDUCTIVE	
32	4-033-484-01	RUBBER	
33	X-4020-994-1	FILTER ASSY	
34	4-033-935-01	CUSHION	
35	4-033-999-01	COPPER LEAF	

SECTION 6
ELECTRICAL PARTS LIST

A

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

RESISTORS
- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION		REMARK
	A-1296-919-A	A BOARD, COMPLETE		
		**********		
		<CAPACITOR>		
C001	1-135-149-21	TANTAL. CHIP 2.2MF	20%	10V
C006	1-162-923-11	CERAMIC CHIP 47PF	5%	50V
C007	1-135-210-11	TANTAL. CHIP 4.7MF	20%	10V
C008	1-164-315-11	CERAMIC CHIP 470PF	5%	50V
C009	1-164-315-11	CERAMIC CHIP 470PF	5%	50V
C011	1-126-405-11	ELECT CHIP 10MF	20%	50V
C012	1-164-475-11	CERAMIC CHIP 0.22MF	10%	50V
C013	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C014	1-162-949-11	CERAMIC CHIP 47PF	5%	50V
C015	1-162-997-11	CERAMIC CHIP 10PF	0.5PF	50V
C018	1-164-360-11	CERAMIC CHIP 0.1MF		16V
C020	1-162-927-11	CERAMIC CHIP 100PF	5%	50V
C029	1-162-959-11	CERAMIC CHIP 330PF	5%	50V
C033	1-135-085-21	TANTAL. CHIP 4.7MF	20%	25V
C040	1-128-415-11	ELECT CHIP 68MF	20%	10V
C041	1-135-216-11	TANTAL. CHIP 10MF	20%	10V
C044	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C046	1-164-360-11	CERAMIC CHIP 0.1MF		16V
C047	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C049	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C053	1-162-960-11	CERAMIC CHIP 220PF	10%	50V
C056	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C062	1-135-216-11	TANTAL. CHIP 10MF	20%	10V
C098	1-162-960-11	CERAMIC CHIP 220PF	10%	50V
C099	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C101	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C102	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C103	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C104	1-164-657-11	CERAMIC CHIP 0.015MF	10%	50V
C105	1-164-657-11	CERAMIC CHIP 0.015MF	10%	50V
C106	1-164-657-11	CERAMIC CHIP 0.015MF	10%	50V
C107	1-126-392-11	ELECT CHIP 100MF	20%	6.3V
C108	1-135-216-11	TANTAL. CHIP 10MF	20%	10V
C111	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C112	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C120	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C121	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C122	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C123	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C124	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C125	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C202	1-164-227-11	CERAMIC CHIP 0.022MF	10%	25V
C203	1-162-916-11	CERAMIC CHIP 12PF	5%	50V
C205	1-162-925-11	CERAMIC CHIP 68PF	5%	50V
C206	1-164-156-11	CERAMIC CHIP 0.1MF		25V
C207	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C208	1-135-149-21	TANTAL. CHIP 2.2MF	20%	10V
C209	1-126-392-11	ELECT CHIP 100MF	20%	6.3V
C210	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C211	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C212	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C214	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C215	1-135-216-11	TANTAL. CHIP 10MF	20%	10V
C216	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C217	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C222	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C229	1-162-907-11	CERAMIC CHIP 2PF	0.25PF	50V
C232	1-164-227-11	CERAMIC CHIP 0.022MF	10%	25V
C233	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C234	1-162-917-11	CERAMIC CHIP 15PF	5%	50V
C235	1-162-925-11	CERAMIC CHIP 68PF	5%	50V
C236	1-162-927-11	CERAMIC CHIP 100PF	5%	50V
C237	1-164-315-11	CERAMIC CHIP 470PF	5%	50V
C238	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C239	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C240	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C241	1-126-391-11	ELECT CHIP 47MF	20%	6.3V
C243	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C250	1-164-315-11	CERAMIC CHIP 470PF	5%	50V
C251	1-126-391-11	ELECT CHIP 47MF	20%	6.3V
C253	1-135-155-21	TANTAL. CHIP 4.7MF	20%	16V
C254	1-135-155-21	TANTAL. CHIP 4.7MF	20%	16V
C301	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C303	1-128-257-21	ELECT CHIP 33MF	20%	10V
C304	1-162-959-11	CERAMIC CHIP 330PF	5%	50V
C306	1-164-357-11	CERAMIC CHIP 1000PF	5%	50V
C308	1-162-917-11	CERAMIC CHIP 15PF	5%	50V
C309	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C310	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C311	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C312	1-135-210-11	TANTAL. CHIP 4.7MF	20%	10V
C313	1-162-922-11	CERAMIC CHIP 39PF	5%	50V
C314	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C315	1-135-091-00	TANTAL. CHIP 1MF	20%	16V
C316	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C317	1-164-357-11	CERAMIC CHIP 1000PF	5%	50V
C318	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C319	1-162-915-11	CERAMIC CHIP 10PF	0.5PF	50V
C320	1-162-907-11	CERAMIC CHIP 2PF	0.25PF	50V
C326	1-135-145-11	TANTAL. CHIP 0.47MF	20%	25V
C327	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C328	1-135-216-11	TANTAL. CHIP 10MF	20%	10V
C331	1-162-924-11	CERAMIC CHIP 56PF	5%	50V
C332	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C333	1-162-915-11	CERAMIC CHIP 10PF	0.5PF	50V
C337	1-162-970-11	CERAMIC CHIP 0.01MF	10%	25V
C338	1-162-911-11	CERAMIC CHIP 6PF	0.5PF	50V

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
C339	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C340	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C341	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C342	1-135-149-21	TANTAL. CHIP	2.2MF	20% 10V	
C343	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C344	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C345	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C348	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C350	1-126-392-11	ELECT CHIP	100MF	20% 6.3V	
C361	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C362	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C363	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C364	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C365	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C366	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C367	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C368	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C369	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C370	1-162-916-11	CERAMIC CHIP	12PF	5% 50V	
C371	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C372	1-162-918-11	CERAMIC CHIP	18PF	5% 50V	
C381	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C382	1-128-415-11	ELECT CHIP	68MF	20% 10V	
C383	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C401	1-128-415-11	ELECT CHIP	68MF	20% 10V	
C402	1-162-959-11	CERAMIC CHIP	330PF	5% 50V	
C403	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C404	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C405	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C406	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C407	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C408	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C409	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C410	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C411	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C412	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C413	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C414	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C415	1-135-159-21	TANTAL. CHIP	10MF	20% 16V	
C416	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C417	1-126-394-11	ELECT CHIP	10MF	20% 16V	
C418	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C419	1-162-917-11	CERAMIC CHIP	15PF	5% 50V	
C420	1-135-072-21	TANTAL. CHIP	0.22MF	20% 35V	
C421	1-164-315-11	CERAMIC CHIP	470PF	5% 50V	
C422	1-164-315-11	CERAMIC CHIP	470PF	5% 50V	
C423	1-164-315-11	CERAMIC CHIP	470PF	5% 50V	
C501	1-135-161-21	TANTAL. CHIP	22MF	20% 10V	
C502	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C504	1-126-394-11	ELECT CHIP	10MF	20% 16V	
C505	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C506	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C510	1-126-392-11	ELECT CHIP	100MF	20% 6.3V	
C512	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C514	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C521	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C523	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C524	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C525	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C531	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C532	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C533	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C601	1-135-072-21	TANTAL. CHIP	0.22MF	20% 35V	
C603	1-128-390-11	ELECT	220MF	20% 6.3V	
C604	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C605	1-163-275-11	CERAMIC CHIP	0.001MF	5% 50V	
C606	1-135-210-11	TANTAL. CHIP	4.7MF	20% 10V	
C607	1-135-145-11	TANTAL. CHIP	0.47MF	20% 25V	
C608	1-126-394-11	ELECT CHIP	10MF	20% 16V	
C609	1-135-072-21	TANTAL. CHIP	0.22MF	20% 35V	
C610	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C611	1-128-399-11	ELECT	330MF	20% 16V	
C612	1-128-399-11	ELECT	330MF	20% 16V	
C613	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C614	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C617	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	
C618	1-128-451-11	ELECT CHIP	22MF	20% 16V	
C619	1-128-415-11	ELECT CHIP	68MF	20% 10V	
C620	1-126-405-11	ELECT CHIP	10MF	20% 50V	
C621	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C622	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C623	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C624	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C625	1-126-392-11	ELECT CHIP	100MF	20% 6.3V	
C626	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C627	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C628	1-126-398-11	ELECT CHIP	4.7MF	20% 35V	
C629	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C630	1-162-970-11	CERAMIC CHIP	0.01MF	10% 25V	
C631	1-135-165-11	TANTAL. CHIP	33MF	20% 16V	
C633	1-126-396-11	ELECT CHIP	47MF	20% 16V	
C635	1-126-394-11	ELECT CHIP	10MF	20% 16V	
C636	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C637	1-128-390-11	ELECT	220MF	20% 6.3V	
C638	1-128-415-11	ELECT CHIP	68MF	20% 10V	
C639	1-135-155-21	TANTAL. CHIP	4.7MF	20% 16V	
C640	1-135-216-11	TANTAL. CHIP	10MF	20% 10V	
C651	1-128-399-11	ELECT	330MF	20% 16V	
C652	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C653	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C654	1-137-528-11	FILM	0.1MF	10% 250V	
C655	1-165-157-11	CERAMIC	39PF	5% 6KV	
C656	1-135-149-21	TANTAL. CHIP	2.2MF	20% 10V	
C657	1-135-091-00	TANTAL. CHIP	1MF	20% 16V	
C661	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
		<FILTER>			
CF201	1-577-559-11	FILTER, CERAMIC			
CF202	1-404-901-11	TRAP, CERAMIC			
CF203	1-577-610-11	DISCRIMINATOR, CERAMIC			
		<CONNECTOR>			
CN001	1-568-359-41	CONNECTOR, BOARD TO BOARD 20P			
CN002	1-506-470-11	PIN, CONNECTOR 5P			
CN003	1-566-530-11	CONNECTOR, FPC (ZIF) 14P			
CN004	1-566-529-11	CONNECTOR, FPC (ZIF) 13P			
CN005	1-691-000-11	CONNECTOR, BOARD TO BOARD 3P			
CN006	1-691-000-11	CONNECTOR, BOARD TO BOARD 3P			
CN007	1-506-467-11	PIN, CONNECTOR 2P			
		<DIODE>			
D001	8-719-404-46	DIODE MA110			
D002	8-719-404-46	DIODE MA110			
D010	8-719-404-46	DIODE MA110			
D015	8-719-404-46	DIODE MA110			

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D016	8-719-404-46	DIODE MA110	
D017	8-719-404-46	DIODE MA110	
D201	8-719-158-37	DIODE RD9.1S-B2	
D301	8-719-158-19	DIODE RD6.2S-B	
D302	8-719-158-19	DIODE RD6.2S-B	
D303	8-719-404-46	DIODE MA110	
D304	8-719-404-46	DIODE MA110	
D401	8-719-158-19	DIODE RD6.2S-B	
D402	8-719-158-19	DIODE RD6.2S-B	
D403	8-719-158-19	DIODE RD6.2S-B	
D404	8-719-158-19	DIODE RD6.2S-B	
D405	8-719-158-19	DIODE RD6.2S-B	
D406	8-719-158-55	DIODE RD15S-B	
D407	8-719-158-55	DIODE RD15S-B	
D408	8-719-158-55	DIODE RD15S-B	
D409	8-719-158-55	DIODE RD15S-B	
D410	8-719-158-55	DIODE RD15S-B	
D411	8-719-107-43	DIODE RD24M-B2	
D501	8-719-404-46	DIODE MA110	
D502	8-719-404-46	DIODE MA110	
D601	8-719-988-72	DIODE SC802-06	
D602	8-719-988-72	DIODE SC802-06	
D603	8-719-988-76	DIODE SC902-2	
D605	8-719-975-85	DIODE ERB83-004	
D606	8-719-404-46	DIODE MA110	
D651	8-719-988-72	DIODE SC802-06	
D652	8-719-404-46	DIODE MA110	
D653	8-719-404-46	DIODE MA110	
		<DELAY LINE>	
DL301	1-415-766-11	DELAY LINE, Y	
		<FUSE>	
F601	⚠ 1-532-778-51	FUSE, MICRO (SECONDARY) 1.6A/125V	
F602	⚠ 1-532-778-51	FUSE, MICRO (SECONDARY) 1.6A/125V	
F651	⚠ 1-532-776-41	FUSE, MICRO (SECONDARY) 1A/125V	
		<FILTER>	
FB001	1-543-813-21	FILTER, EMI	
FB101	1-543-813-21	FILTER, EMI	
FB301	1-543-813-21	FILTER, EMI	
FB401	1-543-813-21	FILTER, EMI	
FB402	1-543-813-21	FILTER, EMI	
FB403	1-543-813-21	FILTER, EMI	
FB404	1-543-813-21	FILTER, EMI	
SWF201	1-404-227-51	SAWF 45MHZ	
		<IC>	
IC001	8-759-636-18	IC M50439-913FP	
IC003	8-759-937-54	IC S-81250HG-RD-S	
IC004	8-752-323-24	IC CXK1005M	
IC006	8-759-501-44	IC PST529DMT	
IC007	8-759-157-40	IC UPC574J	
IC201	8-759-602-99	IC CX20183	
IC301	8-759-231-39	IC TA8735F	
IC302	8-759-504-44	IC MM1031XMR	
IC401	8-759-008-82	IC MC14013BF	
IC402	8-759-234-13	IC TC4S30F	
IC403	8-759-234-85	IC TA8696F	
IC501	8-759-700-50	IC NJM386M	
IC502	8-759-633-55	IC M5222FP	
IC601	8-759-945-17	IC MB3775PF	
IC651	8-759-906-22	IC MB3759PF	
		<JACK>	
J101	1-507-921-00	JACK	
J301	1-691-001-11	JACK	
J501	1-563-282-11	JACK, SMALL TYPE	
J502	1-563-020-11	JACK, SMALL TYPE	
J601	1-569-966-11	JACK, DC	
		<COIL>	
L001	1-412-029-11	INDUCTOR CHIP 10UH	
L101	1-412-029-11	INDUCTOR CHIP 10UH	
L201	1-410-989-11	INDUCTOR CHIP 0.47UH	
L202	1-410-992-11	INDUCTOR CHIP 0.82UH	
L203	1-412-008-11	INDUCTOR CHIP 15UH	
L204	1-412-008-11	INDUCTOR CHIP 15UH	
L205	1-410-998-31	INDUCTOR CHIP 2.7UH	
L301	1-410-214-31	INDUCTOR CHIP 68UH	
L302	1-410-943-31	INDUCTOR CHIP 12UH	
L303	1-410-214-31	INDUCTOR CHIP 68UH	
L304	1-410-943-31	INDUCTOR CHIP 12UH	
L305	1-410-214-31	INDUCTOR CHIP 68UH	
L306	1-410-943-31	INDUCTOR CHIP 12UH	
L307	1-410-212-51	INDUCTOR CHIP 47UH	
L308	1-410-211-51	INDUCTOR CHIP 39UH	
L309	1-412-032-11	INDUCTOR CHIP 100UH	
L311	1-412-029-11	INDUCTOR CHIP 10UH	
L401	1-412-029-11	INDUCTOR CHIP 10UH	
L402	1-412-029-11	INDUCTOR CHIP 10UH	
L405	1-410-212-51	INDUCTOR CHIP 47UH	
L601	1-412-030-11	INDUCTOR CHIP 22UH	
L602	1-412-030-11	INDUCTOR CHIP 22UH	
L603	1-412-030-11	INDUCTOR CHIP 22UH	
L604	1-412-030-11	INDUCTOR CHIP 22UH	
L605	1-412-032-11	INDUCTOR CHIP 100UH	
L651	1-424-588-11	COIL, CHOKE 120UH	
		<TRANSISTOR>	
Q001	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q002	8-729-905-12	TRANSISTOR DTA144EU	
Q003	8-729-905-18	TRANSISTOR DTC144EU	
Q004	8-729-905-18	TRANSISTOR DTC144EU	
Q005	8-729-927-74	TRANSISTOR UMG2	
Q008	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q009	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q101	8-729-927-65	TRANSISTOR UMT1	
Q102	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q103	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q201	8-729-201-27	TRANSISTOR 2SC2715-Y	
Q202	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q204	8-729-101-07	TRANSISTOR 2SB798-DL	
Q205	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q206	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q301	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q304	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q401	8-729-927-59	TRANSISTOR UMZ1	
Q402	8-729-927-62	TRANSISTOR UMX1	
Q504	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q505	8-729-117-32	TRANSISTOR 2SC4177-L6	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
Q506	8-729-302-75	TRANSISTOR 2SD1366A-D	
Q508	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q509	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q510	8-729-927-59	TRANSISTOR UMZ1	
Q601	8-729-927-59	TRANSISTOR UMZ1	
Q603	8-729-807-16	TRANSISTOR 2SD1621-R	
Q604	8-729-905-12	TRANSISTOR DTA144EU	
Q605	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q606	8-729-923-99	TRANSISTOR DTA114YU	
Q607	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q608	8-729-927-62	TRANSISTOR UMX1	
Q610	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q611	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q652	8-729-202-87	TRANSISTOR 2SA1242LB-Y	
Q654	8-729-807-50	TRANSISTOR 2SD1623-R	
Q655	8-729-807-50	TRANSISTOR 2SD1623-R	
Q656	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q657	8-729-920-99	TRANSISTOR DTA114EU	

<RESISTOR>

R001	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R002	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R003	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R004	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R005	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R006	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R007	1-216-819-11	METAL GLAZE	680	5%	1/16W
R008	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R009	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R011	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R012	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R013	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R015	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R018	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R019	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R022	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R023	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R025	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R032	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R039	1-216-809-11	METAL GLAZE	100	5%	1/16W
R040	1-216-847-11	METAL GLAZE	150K	5%	1/16W
R041	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R043	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R048	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R050	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R056	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R060	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R068	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R078	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R087	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R091	1-216-864-11	METAL GLAZE	0	5%	1/16W
R099	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R101	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R102	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R103	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R104	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R105	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R106	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R107	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R108	1-216-817-11	METAL GLAZE	470	5%	1/16W
R109	1-216-797-11	METAL GLAZE	10	5%	1/16W
R111	1-216-296-00	METAL GLAZE	0	5%	1/8W
R112	1-216-296-00	METAL GLAZE	0	5%	1/8W
R113	1-216-296-00	METAL GLAZE	0	5%	1/8W
R114	1-216-296-00	METAL GLAZE	0	5%	1/8W
R201	1-216-842-11	METAL GLAZE	56K	5%	1/16W
R202	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R203	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R204	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R205	1-216-848-11	METAL GLAZE	180K	5%	1/16W
R206	1-216-817-11	METAL GLAZE	470	5%	1/16W
R208	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R209	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R210	1-216-819-11	METAL GLAZE	680	5%	1/16W
R211	1-216-801-11	METAL GLAZE	22	5%	1/16W
R212	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R213	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R214	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R215	1-216-813-11	METAL GLAZE	220	5%	1/16W
R216	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R217	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R218	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W
R219	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R220	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R221	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R222	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R223	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R224	1-216-809-11	METAL GLAZE	100	5%	1/16W
R225	1-216-807-11	METAL GLAZE	68	5%	1/16W
R226	1-216-803-11	METAL GLAZE	33	5%	1/16W
R227	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W
R228	1-216-815-11	METAL GLAZE	330	5%	1/16W
R239	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R240	1-216-801-11	METAL GLAZE	22	5%	1/16W
R245	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R246	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W
R247	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R248	1-216-847-11	METAL GLAZE	150K	5%	1/16W
R251	1-216-797-11	METAL GLAZE	10	5%	1/16W
R252	1-216-815-11	METAL GLAZE	330	5%	1/16W
R253	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R258	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R262	1-216-864-11	METAL GLAZE	0	5%	1/16W
R301	1-216-809-11	METAL GLAZE	100	5%	1/16W
R302	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R303	1-216-807-11	METAL GLAZE	68	5%	1/16W
R304	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R305	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R306	1-216-795-11	METAL GLAZE	6.8	5%	1/16W
R307	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R309	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R310	1-216-811-11	METAL GLAZE	150	5%	1/16W
R312	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R313	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R314	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R315	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R316	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R317	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R319	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R320	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R321	1-216-817-11	METAL GLAZE	470	5%	1/16W
R322	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R323	1-216-817-11	METAL GLAZE	470	5%	1/16W
R326	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R328	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R329	1-216-821-11	METAL GLAZE	1K	5%	1/16W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R330	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R332	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R333	1-216-818-11	METAL GLAZE	560	5%	1/16W	
R334	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R335	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R336	1-216-840-11	METAL GLAZE	39K	5%	1/16W	
R338	1-216-854-11	METAL GLAZE	560K	5%	1/16W	
R340	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	
R341	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R342	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R343	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R344	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R345	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R346	1-216-836-11	METAL GLAZE	18K	5%	1/16W	
R347	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W	
R354	1-216-019-00	METAL GLAZE	56	5%	1/10W	
R355	1-216-818-11	METAL GLAZE	560	5%	1/16W	
R356	1-216-815-11	METAL GLAZE	330	5%	1/16W	
R360	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W	
R364	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	
R365	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	
R366	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	
R369	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R370	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R371	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R372	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R373	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R374	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R375	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R376	1-216-809-11	METAL GLAZE	100	5%	1/16W	
R401	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R403	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R404	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R405	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R406	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R407	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R409	1-218-295-11	METAL CHIP	5.6K	0.50%	1/16W	
R410	1-216-005-00	METAL GLAZE	15	5%	1/10W	
R411	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R412	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R414	1-216-838-11	METAL CHIP	27K	0.50%	1/16W	
R415	1-216-821-11	METAL CHIP	1K	0.50%	1/16W	
R416	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R417	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R422	1-216-846-11	METAL CHIP	120K	0.50%	1/16W	
R501	1-216-836-11	METAL GLAZE	18K	5%	1/16W	
R502	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R503	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R507	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R510	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R512	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R518	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R519	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R520	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R521	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R522	1-216-813-11	METAL GLAZE	220	5%	1/16W	
R523	1-216-813-11	METAL GLAZE	220	5%	1/16W	
R524	1-216-835-11	METAL GLAZE	15K	5%	1/16W	
R528	1-216-847-11	METAL GLAZE	150K	5%	1/16W	
R531	1-216-816-11	METAL GLAZE	390	5%	1/16W	
R532	1-216-864-11	METAL GLAZE	0	5%	1/16W	
R533	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R534	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R537	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R538	1-216-854-11	METAL GLAZE	560K	5%	1/16W	
R541	1-216-817-11	METAL GLAZE	470	5%	1/16W	
R543	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W	
R549	1-216-813-11	METAL GLAZE	220	5%	1/16W	
R552	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W	
R553	1-216-811-11	METAL GLAZE	150	5%	1/16W	
R561	1-216-797-11	METAL GLAZE	10	5%	1/16W	
R601	1-216-835-11	METAL GLAZE	15K	5%	1/16W	
R602	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R603	1-216-839-11	METAL GLAZE	33K	5%	1/16W	
R604	1-216-836-11	METAL GLAZE	18K	5%	1/16W	
R606	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	
R607	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R608	1-216-839-11	METAL GLAZE	33K	5%	1/16W	
R609	1-216-839-11	METAL GLAZE	33K	5%	1/16W	
R610	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W	
R611	1-216-853-11	METAL GLAZE	470K	5%	1/16W	
R612	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R613	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W	
R614	1-216-837-11	METAL GLAZE	22K	5%	1/16W	
R615	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R617	1-216-813-11	METAL GLAZE	220	5%	1/16W	
R618	1-216-853-11	METAL GLAZE	470K	5%	1/16W	
R619	1-216-840-11	METAL GLAZE	39K	5%	1/16W	
R620	1-216-835-11	METAL GLAZE	15K	5%	1/16W	
R621	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W	
R622	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R623	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R624	1-216-683-11	METAL CHIP	22K	0.50%	1/10W	
R625	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R626	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R627	1-216-846-11	METAL GLAZE	120K	5%	1/16W	
R629	1-216-134-00	METAL GLAZE	2.2	5%	1/8W	
R630	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W	
R631	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W	
R633	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R634	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R647	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R648	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R649	1-216-855-11	METAL GLAZE	680K	5%	1/16W	
R651	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R652	1-216-817-11	METAL GLAZE	470	5%	1/16W	
R655	1-216-842-11	METAL GLAZE	56K	5%	1/16W	
R656	1-216-198-00	METAL GLAZE	1K	5%	1/8W	
R657	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R658	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W	
R659	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R661	1-216-809-11	METAL GLAZE	100	5%	1/16W	

<NETWORK>

RB003	1-236-412-11	NETWORK, RES	1.0K
RB004	1-236-412-11	NETWORK, RES	1.0K
RB005	1-236-432-11	NETWORK, RES	47K
RB006	1-236-432-11	NETWORK, RES	47K
RB007	1-236-412-11	NETWORK, RES	1.0K
RB008	1-236-412-11	NETWORK, RES	1.0K
RB013	1-236-424-11	NETWORK, RES	10K
RB016	1-236-412-11	NETWORK, RES	1.0K
RB017	1-236-424-11	NETWORK, RES	10K
RB101	1-236-424-11	NETWORK, RES	10K
RB301	1-236-432-11	NETWORK, RES	47K
RB501	1-236-424-11	NETWORK, RES	10K

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

A M X J

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<VARIABLE RESISTOR>			
RV001	1-238-088-11	RES, ADJ, CERMET 2.2K			
RV201	1-238-087-11	RES, ADJ CERMET 1K			
RV301	1-238-091-11	RES, ADJ CERMET 22K			
RV302	1-238-091-11	RES, ADJ CERMET 22K			
RV306	1-238-091-11	RES, ADJ CERMET 22K			
RV401	1-238-091-11	RES, ADJ CERMET 22K			
RV402	1-238-091-11	RES, ADJ CERMET 22K			
RV403	1-238-091-11	RES, ADJ CERMET 22K			
RV404	1-238-091-11	RES, ADJ CERMET 22K			
RV405	1-238-091-11	RES, ADJ CERMET 22K			
RV406	1-238-091-11	RES, ADJ CERMET 22K			
RV407	1-238-091-11	RES, ADJ CERMET 22K			
RV408	1-238-090-11	RES, ADJ CERMET 10K			
RV409	1-241-730-11	RES, ADJ, CERMET 10K			
RV602	1-238-087-11	RES, ADJ CERMET 1K			
		<TRANSFORMER>			
T201	1-460-076-11	COIL			
T202	1-460-076-11	COIL			
T601	1-449-927-11	TRANSFORMER, DC-DC CONVERTER			
T651	1-450-723-11	TRANSFORMER, INVERTER			
		<TUNER>			
TU101	⚠1-693-026-11	BT TUNER (BT-5A101)			
		<CRYSTAL>			
X002	1-577-118-11	VIBRATOR, LITHIUM NIOBATE			
X301	1-567-505-11	OSCILLATOR, CRYSTAL			
X302	1-577-227-11	VIBLATOR, CERAMIC			
**********					
	A-1301-855-A	M BOARD, COMPLETE			
		**********			
		<DIODE>			
D704	8-719-404-46	DIODE MA110			
		<VARIABLE RESISTOR>			
RV701	1-241-118-11	RES, VAR, CARBON 20K			
RV702	1-241-118-11	RES, VAR, CARBON 20K			
		<SWITCH>			
S701	1-571-860-11	SWITCH, SLIDE			
S703	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)			
S704	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)			
S705	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)			
**********					
	A-1390-290-A	X BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C801	1-164-360-11	CERAMIC CHIP 0.1MF			16V
C802	1-162-970-11	CERAMIC CHIP 0.01MF		10%	25V
		<DIODE>			
D801	8-719-404-46	DIODE MA110			
D802	8-719-105-82	DIODE RD5.1M-B2			
D803	8-719-404-46	DIODE MA110			
D804	8-719-105-52	DIODE RD3.6M-B2			
D805	8-719-404-46	DIODE MA110			
D806	8-719-157-57	DIODE RD13M-B			
D807	8-719-157-57	DIODE RD13M-B			
D808	8-719-157-57	DIODE RD13M-B			
		<FUSE>			
F801	⚠1-532-778-11	FUSE, MICRO (SECONDARY) 1.6A/125V			
		<JACK>			
J801	1-537-241-11	TERMINAL BOARD (BATTERY)			
		<TRANSISTOR>			
Q801	8-729-140-63	TRANSISTOR 2SA1611-M5M6			
Q802	8-729-117-32	TRANSISTOR 2SC4177-L6			
Q803	8-729-117-32	TRANSISTOR 2SC4177-L6			
Q804	8-729-202-87	TRANSISTOR 2SA1242LB-Y			
Q805	8-729-117-32	TRANSISTOR 2SC4177-L6			
		<RESISTOR>			
R801	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R802	1-216-818-11	METAL GLAZE	560	5%	1/16W
R803	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R804	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R805	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R806	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R807	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R808	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R809	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R810	1-220-270-11	METAL GLAZE	390	5%	1/2W
R811	1-216-194-00	METAL GLAZE	680	5%	1/8W
R812	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R813	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R814	1-216-809-11	METAL GLAZE	100	5%	1/16W
R815	1-216-864-11	METAL GLAZE	0	5%	1/16W
R816	1-216-864-11	METAL GLAZE	0	5%	1/16W
R817	1-216-864-11	METAL GLAZE	0	5%	1/16W
**********					
	A-1394-318-A	J BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C901	1-135-165-11	TANTAL. CHIP 33MF		20%	16V
		<CONNECTOR>			
CN101	1-566-536-11	CONNECTOR, FPC (ZIF) 20P			
		<DIODE>			
D901	8-719-158-55	DIODE RD15S-B			

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The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
D902	8-719-928-13	DIODE SLM-13DW	
D903	8-719-158-19	DIODE RD6.2S-B	
D904	8-719-928-13	DIODE SLM-13DW	
D905	8-719-158-19	DIODE RD6.2S-B	
D906	8-719-928-13	DIODE SLM-13DW	
D907	8-719-158-19	DIODE RD6.2S-B	
D908	8-719-404-46	DIODE MA110	
D909	8-719-404-46	DIODE MA110	
D910	8-719-928-16	DIODE SLM-13VW	
D911	8-719-404-46	DIODE MA110	
		<IC>	
IC901	8-749-900-36	IC BX-1393	
		<TRANSISTOR>	
Q901	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q902	8-729-140-63	TRANSISTOR 2SA1611-M5M6	
Q903	8-729-117-32	TRANSISTOR 2SC4177-L6	
Q904	8-729-907-00	TRANSISTOR DTC114EU	
Q905	8-729-905-12	TRANSISTOR DTA144EU	
Q906	8-729-907-00	TRANSISTOR DTC114EU	
Q907	8-729-117-32	TRANSISTOR 2SC4177-L6	
		<RESISTOR>	
R902	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R903	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R904	1-216-840-11	METAL GLAZE 39K 5% 1/16W	
R905	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R906	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R907	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R908	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R909	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R910	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R911	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R912	1-216-851-11	METAL GLAZE 330K 5% 1/16W	
R913	1-216-849-11	METAL GLAZE 220K 5% 1/16W	
R914	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
		<CDS CELL>	
RC901	1-519-698-11	CDS CELL	
		<VARIABLE RESISTOR>	
RV901	1-238-093-11	RES, ADJ CERMET 100K	
		<SWITCH>	
S901	1-571-674-11	SWITCH, SLIDE	
S902	1-571-860-11	SWITCH, SLIDE	
S903	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S904	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S905	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S906	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S907	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S908	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S909	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S910	1-571-187-11	SWITCH, TACTIL (REFLOW TYPE)	
S911	1-571-674-11	SWITCH, SLIDE	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
ANT901	1-501-523-11	ANTENNA, TELESCOPIC	
	1-544-584-11	SPEAKER (2.8CM)	
BL901	1-550-734-11	BACK LIGHT UNIT	
	1-640-784-11	PC BOARD, FP-AJ FLEXIBLE	
LC901	1-808-989-12	MODULE, LIQUID DISPLAY PANEL	

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ACCESSORIES AND PACKING MATERIALS
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PART NO.	DESCRIPTION	REMARK
X-4397-609-1	HOOD ASSY	
⚠ 1-465-444-31	ADAPTOR, AC	
1-465-939-21	CARD COMMANDER (RM-KS44)	
*3-324-573-01	SHEET, PROTECTION (WHITE MODEL ONLY)	
3-754-565-21	MANUAL, INSTRUCTION	
*4-033-768-01	CUSHION (A)	
*4-033-769-01	CUSHION (B)	
*4-035-019-01	INDIVIDUAL CARTON	
*4-035-024-01	MASTER CARTON, 5 SETS	
*4-397-651-01	BAG, PROTECTION	

9-964-778-01

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